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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,036	03/08/2005	Hiroshi Tanaka	36856.1322	5563

35510 7590 02/23/2006

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EXAMINER
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MAI, ANH T

ART UNIT	PAPER NUMBER
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2832

DATE MAILED: 02/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/527,036

Applicant(s)

TANAKA ET AL.

Examiner

Anh T. Mai

Art Unit

2832

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/8/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 U.S.C. § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over figure 10 of prior art admitted by applicant in view of Takahiro et al. [200150241A].

Figure 10 of prior art discloses a laminated coil comprising:

- via holes 15 in the lamination direction of the laminated body;
- belt-shaped conductors 14 formed on laminating surfaces of the laminated body, fixed end portions are connected by via holes;
- the coil wound in direction perpendicular to direction of lamination;
- via holes are formed in each ceramic layer constituting the laminated body and are through holes, each being filled with conductor lying in a row in lamination direction.

The prior art discloses the claimed invention except for the difference between the diameter in the axial direction of the coil on opening surface of ceramic layer and the diameter in the axial direction of the coil on the opening surface in the axial direction of the coil on the opening surface of other opening surface is smaller than the difference between the diameter perpendicular to the axial direction of the coil on the opening surface of one opening of the ceramic layer and the diameter perpendicular to the axial direction of the coil on the opening surface of the other opening.

Takahiro discloses in figures 4a-b, via holes having top opening 24a in ellipse; bottom opening 24b of center section in circle [0022; lines 15-20 of the translation] therefore, it provides a difference between the diameter in the axial direction of the coil on opening surface of ceramic layer and the diameter in the axial direction of the coil on the opening surface in the axial direction of the coil on the opening surface of other opening surface is smaller than the difference between the diameter perpendicular to the axial direction of the coil on the opening surface of one opening of the ceramic layer and the diameter perpendicular to the axial direction of the coil on the opening surface of the other opening.

At the time of the invention made, it would have been obvious to one of ordinary skilled in the art to form the thru-hole in such shape as taught by Takahiro to the laminated coil as disclosed by figure 10 of prior art admitted by applicant. The motivation would have been to improve the connection dependability of the conductor due to the cross sectional area of the thru-hole becoming smaller towards the bottom of the thru-hole [0050]. Therefore, it would have been obvious to combine Takahiro with figure 10 of prior art admitted by applicant.

With respect to claim 2, Takahiro discloses the thru-hole having a substantially oval flat shape and the short axis direction correspond with axial direction of the coil.

With respect to claims 3, Takahiro discloses a method of making the laminated coil in figures 4-7, wherein the via holes being filled with conductive paste.

### ***Conclusion***

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892 form.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh T. Mai whose telephone number is 571-272-1995. The examiner can normally be reached on 5/4/9 Schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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**ANH MAI  
PRIMARY EXAMINER**